WHAT IS CLAIMED IS:

1. A carbon ink made into a paste with an organic binder and a solvent, the carbon ink comprising:

carbon particles including a 6–membered carbon ring; and

support particles for supporting the carbon particles.

2. The carbon ink of Claim 1, wherein a size of the support particles is smaller than a longitudinal length of the carbon particles.

3. The carbon ink of Claim 1, wherein the support particles are made of self–combustible powder that decomposes into a gas when heated or burned or of a thermally decomposing foaming agent powder.

4. The carbon ink of Claim 3, wherein the decomposition temperature of the support particles is lower than the decomposition temperature of the organic binder.

5. The carbon ink of Claim 1, wherein the carbon particles comprise at least one of the group consisting of carbon nanotubes, graphite, and carbon fibers made into graphite powder.

6. An electron–emitting element, to which the carbon ink of Claim 1 is applied at predetermined positions of a conductor that has been patterned on a substrate, and fired.

7. The electron–emitting element of Claim 6, wherein, in an aggregation of the carbon particles, voids having a size in the range of 0.05 to 5 μ m have been formed by decomposing the support particles.

8. A method for manufacturing an electron–emitting element, comprising:

filling the carbon ink of Claim 1 into a patterned concave board;

transferring the carbon ink filled into the patterned concave board to a blanket; and

transferring the carbon ink transferred to the blanket to a substrate.

9. An image display device for forming images by causing a phosphor layer to emit light with electrons emitted from electron–emitting elements, the image display device comprising:

a vacuum container;

a phosphor layer;

a substrate provided with a cathode wiring made of a patterned conductor; and

electron–emitting elements made by

applying, to predetermined positions of the substrate, a carbon ink made into a paste with an organic binder and a solvent, the ink comprising (i) carbon particles having a 6–membered carbon ring, and (ii) support particles for supporting the carbon particles, and

firing the ink;

wherein the cathode wiring is patterned into stripes;

the phosphor layer has electrically separated stripes that are arranged in a plane substantially parallel to the stripes of the cathode wiring and extend substantially perpendicular to the stripes of the cathode wiring; and the image display device is matrix–driven between the stripes of the phosphor layer and the stripes of the cathode wiring.

10. An image display device for forming images by causing a phosphor layer to emit light with electrons emitted from electron–emitting elements, the image display device comprising:

a vacuum container;

a phosphor layer;

a substrate provided with a cathode wiring made of a patterned conductor;

electron–emitting elements made by

applying, to predetermined positions of the substrate, a carbon ink made into a paste with an organic binder and a solvent, the ink comprising (i) carbon particles having a 6–membered carbon ring, and (ii) support particles for supporting the carbon particles, and

firing the ink; and

gate electrodes arranged between the phosphor layer and the substrate;

wherein the cathode wiring is patterned into stripes;

the gate electrodes have electrically separated stripes that are arranged in a plane substantially parallel to the stripes of the cathode wiring and extend substantially perpendicular to the stripes of the cathode wiring; and the image display device is matrix–driven between the stripes of the phosphor layer and the stripes of the cathode wiring.

11. The image display device of Claim 10, further comprising control electrodes between the phosphor layer and the gate electrodes, the control electrodes functioning to focus or to focus and deflect an electron beam.

12. The image display device of Claim 9, wherein the substrate is integrated into the vacuum container.

13. The image display device of Claim 10, wherein the substrate is integrated into the vacuum container.